

WHAT IS CLAIMED IS:

1. A method of producing an image display unit,
comprising:

an element formation step of forming, on a wafer, a display element layer composed of display elements arrayed on a specific cycle and provided with a magnetic film, and separating the display element layer into the individual display elements with magnetic film portions individually separated from the magnetic film while keeping the array of the display elements;

a selective magnetization step of selecting, of all of the display elements, those located discretely at specific intervals of a value equivalent to an integer-fold of the specific cycle, and magnetizing the magnetic film portions provided on the selected display elements in such a manner that the magnetic film portions provided on the selected display units are magnetically distinguishable from the magnetic film portions provided on the non-selected display elements; and

a mounting step of magnetically attracting the selected display elements while keeping the specific intervals thereof, and transferring the selected display elements onto a mounting board.

2. A method of producing an image display unit

according to claim 1, further comprising the step of repeating said selective magnetization step and said mounting step, to array all of the display elements at the specific intervals on the mounting board.

3. A method of producing an image display unit according to claim 1, wherein said selective magnetization step comprises the step of magnetizing the magnetic film portions on all of the display elements in one direction, and re-magnetizing the magnetic film portions on the selected display elements in the opposed direction.

4. A method of producing an image display unit according to claim 1, wherein said mounting step comprises the step of magnetically attracting only the selected display elements by using an electric magnet.

5. A method of producing an image display unit according to claim 1, wherein said element formation step comprises the step of forming, on the wafer, the display elements which are composed of light emitting diodes located on the front surface sides taken as light emitting sides, and forming the magnetic film on the back surface sides of the display elements.

6. A method of producing an image display unit according to claim 5, wherein said element formation step

09928681 081301

further comprises the step of forming a magnetic film even on portions, not obstructing light emission, of the front surfaces of the light emitting diodes, and magnetically connecting magnetic film portions individually separated from the magnetic film formed on the front surface sides of the light emitting diodes to the magnetic film portions formed on the back surface sides of the display elements.

7. A method of producing an image display unit according to claim 1, wherein said mounting step further comprises the step of eliminating, after arraying the display elements on the mounting board, the magnetization of the magnetic film portions on the display elements.

8. An image display unit comprising:

display elements mounted on a mounting board;

wherein the mounting of said display elements is carried out by a manner of:

forming, on a wafer, a display element layer composed of said display elements arrayed on a specific cycle and provided with a magnetic film, and separating the display element layer into said display elements with magnetic film portions individually separated from the magnetic film while keeping the array of said display elements;

selecting, of all of said display elements, those located discretely at specific intervals of a value equivalent to an integer-fold of the specific cycle, and magnetizing the magnetic film portions provided on said selected display elements in such a manner that the magnetic film portions provided on said selected display units are magnetically distinguishable from the magnetic film portions provided on the non-selected display elements; and

magnetically attracting said selected display elements while keeping the specific intervals thereof, and transferring said selected display elements onto said mounting board.

9. An image display unit according to claim 8, wherein all of said display elements are arrayed at the specific intervals on said mounting board by repeating the selection, magnetization, attraction, and transfer steps.

10. An image display unit according to claim 8, wherein the magnetic film portions on all of said display elements are magnetized in one direction, and then the magnetic film portions on said selected display elements are re-magnetized in the opposed direction.

11. An image display unit according to claim 8,

wherein only said selected display elements are magnetically attracted by using an electric magnet.

12. An image display unit according to claim 8, wherein said display elements which are composed of light emitting diodes located on the front surface sides taken as light emitting sides are formed on the wafer, and the magnetic film is formed on the back surface sides of said display elements.

13. An image display unit according to claim 12, wherein a magnetic film is formed even on portions, not obstructing light emission, of the front surfaces of the light emitting diodes, and magnetic film portions individually separated from the magnetic film formed on the light emitting diodes are magnetically connected to the magnetic film portions formed on the back surface sides of said display elements.

14. An image display unit according to claim 8, wherein after said display elements are arrayed on said mounting board, the magnetization of the magnetic film portions on said display elements is eliminated.